

CLAIMS

1. Method of applying inscriptions in relief to substrates made of plastic, comprising:

- a step in which a plastic material of variable viscosity is deposited in real time in a single operation, only at those places that form the relief inscription, at a sufficient temperature to ensure a physical-chemical bond with the material comprising the substrate,

- a cooling step for the material deposited.

2. Inscription method as in claim 1, characterised by the fact that the substrate is a magnetic card.

3. Inscription method as in claim 1, characterised by the fact that the substrate is a smart card.

4. Inscription method as in claim 1, characterised by the fact that the substrate is a badge.

5. Inscription method as in claims 1 to 4, characterised by the fact that the method comprises a control step for a number (30.1 to 30.n) of vibrating elements in the form of tubes, supplied with fluidised plastic material from a reservoir (33), the vibration of these tubes being synchronised and controlled at frequencies to produce the deposition of drops of fluidised plastic material at the places necessary for a number of deposited drops to form an alphanumeric character or logo or increased thickness or any other form of raised area.

5 7. Inscription method as in claims 1 to 5, characterised  
by the fact that the relief inscription may constitute  
other codes carrying information concerning the substrate  
or the user of the substrate

9. Inscription method characterised by the fact that it incorporates a means (1) of moving the substrate (21), made of plastic, in front of a print station (3) equipped with a number of nozzles (30.3 to 30.n) which eject drops of plastic material of variable viscosity, the said drops forming relief points on the substrate, with the ejector nozzles being fitted with a means (4) of controlling the positioning of the drops in a direction transverse to that of the movement of the substrates, and also a means of controlling the ejection duration of each drop as a function of both the speed of travel of the substrates and the data constituting the inscription.

10. Device as in claim 9, characterised by the fact that  
30 it includes a cooling station (5) for the fluidised  
plastic material.

11. Device as in claims 9 or 10, characterised by the fact that the deposition station (4) includes a control unit (4) connected both to the means of controlling the transfer speed of the substrates (20) in front of the inscription station (3), and to each of the ejector  
5 nozzles (30.1 to 30.n) for fluidised plastic material.

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